

IN THE CLAIMS

Claims 1-17 (Canceled)

--18. (New) A file storage and read-out management apparatus comprising:

a signal processor;

a high-speed operation memory connected to said processor and formed to transfer a program to be operated in said processor therein;

a first storage medium, connected to said processor and storing a plurality of files used for signal processing at said processor, the file being transferred from said first storage medium to said high-speed operation memory, and the file as a result of the signal processing at said processor being transferred from said high-speed operation memory to said first storage medium;

a second storage medium connected to said processor and used for saving the file to be stored in said first storage medium;

E1 a migration priority determining means operated in said processor, for determining a migration priority of the files stored in said first storage medium in response to data transfer and retrieval speeds of said first and second storage media, a frequency of use of the files stored in said first storage medium, a lapse time after stored in said first storage medium and parameter set from outside of said file storage and read-out management apparatus;

a migration processing means, operated in said processor, for transferring the file stored in said first storage medium to said second storage medium in response to the migration priority determined in said migration priority determining means, making the region in a vacant

state, in which the transferred file was stored to enable the region for storing other file, and saving an access information of the transferred file in said first storage medium;

a reloading means, operated in said processor, for retransforming the file stored in said second storage medium, which is determined a status of vacant regions in said first storage medium and the migration priority, to the first storage medium in accordance the access information saved in the first storage medium, and making the region in said second storage medium in a vacant state, in which the retransferred file was stored; and

a direct device access means, operated in the processor, for directly transferring the corresponding file stored in said second storage medium to a predetermined region in said high-speed operation memory without retransferring that corresponding file to said first storage medium when an access request is issued to the corresponding file which was transferred from the first storage medium to the second storage medium by said migration processing means.

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19. (New) A file storage and read-out apparatus as set forth in claim 18, wherein said processor comprises a computer.

20. (New) A file storage and read-out apparatus as set forth in claim 18, wherein the first storage medium is a hard disk.

21. (New) A file storage and read-out apparatus as set forth in claim 18, wherein the second storage medium is a removable medium.

22. (New) A file storage and read-out apparatus as set forth in claim 18, wherein said migration priority determining means determines the priority of migration based on a predetermined standard for a plurality of files stored on the first storage medium and performs the migration from the file with the highest priority.

23. (New) A file storage and read-out management apparatus is set forth in claim 18, wherein

the file stored in said first storage medium as a node defined by a header region and a user data region,

said access information saved in first medium includes said node, a start of the user data region, and a logical size of the file before migration.

E1 24. (New) A file storage and read-out management method performed in a signal processing apparatus comprising a signal processor; a high-speed operation memory connected to said processor and formed to transfer a program to be operated in said processor therein; a first storage medium, connected to said processor and storing a plurality of files used for signal processing at said processor, the file being transferred from said first storage medium to said high-speed operation memory, and the file as a result of the signal processing at said processor being transferred from said high-speed operation memory to said first storage medium; and a second storage medium connected to said processor and used for saving the file to be stored in said first storage medium,

said method including:

a migration priority determining step, for determining a migration priority of the files stored in said first storage medium in response to data transfer and retrieval speeds of said first and second storage media, a frequency of use of the files stored in said first storage medium, a lapse time after stored in said first storage medium and parameter set from outside of said file storage and read-out management apparatus;

a migration processing step, for transferring the file stored in said first storage medium to said second storage medium in response to the migration priority determined in said migration priority determining step, making the region in a vacant state, in which the transferred file was stored to enable the region for storing other file, and saving an access information of the transferred file in said first storage medium;

E1 a reloading step, for retransferring the file stored in said second storage medium, which is determined a status of vacant regions in said first storage medium and the migration priority, to the first storage medium in accordance the access information saved in the first storage medium, and making the region in said second storage medium in a vacant state, in which the retransferred file was stored; and

a direct device access step, for directly transferring the corresponding file stored in said second storage medium to a predetermined region in said high-speed operation memory without retransferring that corresponding file to said first storage medium when an access request is issued to the corresponding file which was transferred from the first storage medium to the second storage medium by said migration processing means.

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